

# CONSIDERATIONS ABOUT THE USE OF ARMED UNMANNED AERIAL VEHICLES (UAVs) AS SEEN THROUGH THE LIGHT OF THE INTERNATIONAL LAW OF ARMED CONFLICT

## CONSIDERAÇÕES SOBRE O EMPREGO DE VEÍCULOS AÉREOS NÃO TRIPULADOS (VANT) ARMADOS À LUZ DO DIREITO INTERNACIONAL DOS CONFLITOS ARMADOS

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### ABSTRACT

*This article presents some considerations about the use of UAVs, particularly armed UAVs, as seen through the International Law of Armed Conflict (LOAC), also known as International Humanitarian Law (IHL). This work begins with an introduction as an orientation for the reader on the topic at hand. Then, an explanation of UAV specific terms as adopted by the Brazilian Ministry of Defense is presented, followed by a brief history of the use of UAVs to date, and their capabilities and limitations. Next, the current debate between those who support and those who condemn the employment of armed UAVs is examined from the point of view of the basic principles of LOAC. Finally the article concludes by considering the potential for the use of UAVs as a compatibilizing agent for this branch of international law, given the broad spectrum of contemporary conflicts.*

**Keywords:** Armed UAVs. International Law of Armed Conflict. LOAC's Principles. Drones. SARP.

### RESUMO

*O presente artigo tece algumas considerações sobre o emprego do VANT, e em particular de sua versão armada, à luz do Direito Internacional dos Conflitos Armados (DICA), também conhecido como Direito Internacional Humanitário (DIH). Tem início com a elaboração da introdução do trabalho, de forma a situar o leitor sobre o assunto a ser abordado. Na sequência, são apresentados os termos e as definições do que vem a ser um VANT, destacando-se aquela constante do Glossário de Termos das Forças Armadas, elaborado pelo Ministério da Defesa. Dando prosseguimento ao trabalho, é apresentado um breve histórico do emprego dos VANT. Em seguida, são apresentados os VANT que vem sendo empregados na atualidade. Ainda, são apresentadas as possibilidades e limitações dos VANT, bem como é examinado o debate atual sobre os argumentos que sustentam e que condenam a utilização, sob o enfoque dos princípios básicos do DICA. Por fim, conclui-se no sentido de pensar-se em um horizonte possível sobre esse uso, compatibilizador desse ramo do Direito Internacional com o amplo espectro dos conflitos contemporâneos.*

**Palavras-chave:** VANT armado. Direito Internacional dos Conflitos Armados. Princípios do DICA. Drones. SARP.

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## I INTRODUCTION

The frequency of use of unmanned aircraft in armed conflicts has significantly increased in recent years, generating concerns, among other, about humanitarian and legal issues.

According to an article by Jeffrey A. Sluka (2013, p. 29) published in the May-June 2013 issue of the *Military Review*, nowadays the use of the UAVs has been said to be the "future of war", the only "good thing that came out from the "war on terror", and an effective and accurate counterterrorism and insurgency weapon. Notwithstanding, this surgical accuracy view has been questioned in face of the statistical information available, as evidenced in the following text:

UAV strikes have already caused over one thousand civil casualties, have shown a special propensity to hit marriages and funerals and appear to be a strong encouragement to insurgency. Instead of supporting the idea that the UAVs close to winning these wars by themselves, statistical data show that it would be more accurate to say that they have been losing them almost by themselves (SLUKA, 2013, p. 30).

In an interview published in May of 2013 on the official webpage of the International Committee of the Red Cross (ICRC), Peter Maurer discusses the new challenges and the need for the States to assess the humanitarian consequences of new technologies, such as those installed in the UAVs, before designing and deploying them (MAURER, 2013).

The considerations above define the objective of this article: to further the discussion about the lawfulness in the light of the International Law of Armed Conflict (ILAC), the use of armed or combat VANTS in the conflicts.

## 2 METHODOLOGY

The methodology adopted for this work aims to point at the path to be followed in order to achieve the proposed objective. To this end, a logical sequence is followed, which, initially, seeks explain the meaning of the term UAV, more precisely in their armed mode, when it is capable of launching strikes or counter strikes against ground platforms, and, as it is generally believed, to aerial platforms in the future. This is done in the chapters that follow the introduction and the methodology sections, where UAV definitions, a brief historical overview of their use, their current development and their possibilities and limitations are discussed.

Once this basic concept has been established, the basic principles of the LOAC will be analyzed so that, in the following chapter we will have the necessary inputs to discuss the integration of UAV capabilities and the most frequent issues deriving therefrom in today's world, in face of the LOAC principles.

The final chapter comes after this discussion with the conclusions and recommendation are presented together with brief comments on the inferences that have been collected, and possible ways of thinking about solutions for the use of these new war vectors. By doing so, an understanding is sought of the current moment in history as a stage where an adjustment is needed between the new and upcoming technologies and the demands and requirements of the international society through the LOAC.

Thus, through the inductive method, the literature review is used to enable us to contemplate the possible and general solutions shedding light on new understandings about the proposed problem, that is, the use of the armed UAVs in face of LOAC principles.

## 3 UNMANNED AERIAL VEHICLE

A UAV (Unmanned Aerial Vehicle), generally called drone in the United States of America, is defined according to the Glossary of the Armed Forces, MD 35-G-01:

An unmanned aerial vehicle with fixed or rotary wings provided with its own propulsion, which can be remotely piloted or equipped with an autonomous navigation system. It is employed in strike or reconnaissance operations and may or not be recoverable (BRASIL, 2007, p. 264).

When used in strike missions carrying weapons the UAV is named UCAV (Unmanned Combat Aerial Vehicle, Unmanned Combat Vehicle or armed UAV.

The United States are heavily investing in a new class of unmanned platform, the so-called MAVs (Micro Aerial Vehicle) that can have about (15) centimeters.

Currently, due to its systemic design, in Brazil they are being called SARP - Sistema de Aeronaves Remotamente Pilotadas (Remotely Piloted Aircraft System).

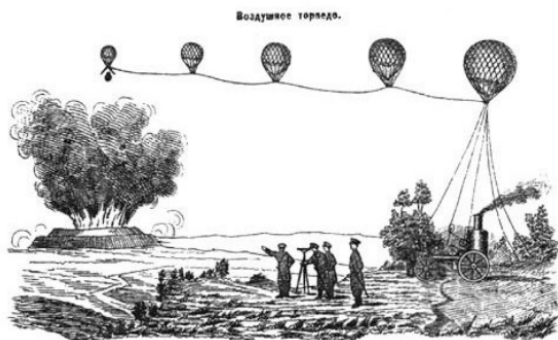
Among the various nomenclatures and categories that can be assigned to the System or to the aircraft, the generic UAV denomination was selected for the purposes of this article as it is one of the best known in the Brazilian territory.

## 4 A BRIEF HISTORY OF THE USE OF THE UAVS

Most reports say that it was in August of 1849 that, for the first time, the use of the Unmanned Aerial Vehicle concept was recorded at the time the Austrians were in control of most of the Italian territory and launched two hundred unmanned balloons against the city of Venice. These balloons were armed with fuse-controlled bombs. A number of bombs went off, but as

the wind changed direction, some of the balloons returned to the Austrian lines. Likewise, this technique was used during the American Civil War (1861-1865) and in the First World War (1914-1918) (ALVES NETO, 2008).

**Figure 1. The balloon aerial strike. Russia, 1880.**



*Бомбардировка с аэростата. "Воздушное торпедо" О. С. Костовича.*

Fonte: [SEM TÍTULO] ([1880]).

The first unmanned aircraft were developed after the 1st World War, initially as "aerial torpedoes" or, as "cruise missiles".

In 1935, an American, Reginald Denny, designed and tested the RP-1 or RPV (Remote Piloted Vehicle) that was the first radio-controlled unmanned vehicle and this marks the beginning of the efforts towards the improvement of this system (HARDGRAVE, 2005).

Despite the American breakthrough, ultimately it were the Germans that employed the UAV concept in the 2nd World War, by launching of the V-1 flying bombs frequently used in the Battle of Britain (HARDGRAVE, 2005).

From the fifties to the seventies, the United States were able to test their first UAV prototype, the Ryanbee, during the Korea and the Vietnam Wars.

Although the United States had used the UAVs in reconnaissance missions in Vietnam, it was their successful use by Israel, during the Lebanon operations, in 1982, that has kindled the American interest in this type of system. The US Navy bought the Pionnere UAV from Israel, and used it to furnish tactical information during the Desert Storm operation in 1991 (PARDESI, 2005).

The UAVs started making news because of their military effectiveness in recent conflicts, as in Afghanistan (2001) and Iraq (2003), where the first armed UAV, the Predator, was deployed.

## 5 THE UAVS TODAY

Today, the existing means, advanced aerodynamics, new materials, microelectronics, artificial satellites and advanced software are contributing to the growing development of increasingly sophisticated UAVs.

The objective of these projects is the design of machines capable of performing multiple military tasks with useful features in terms of cost, performance and safety, in comparison to the manned aircraft, and the ultimate objective of the North American project designers is the creation of unpowered combat aircraft (PLAVETZ, 2009).

Currently, Washington is not just ahead in terms of armed UAV technology development but also in terms of the amount of funds allocated to this end. Working jointly with the DARPA (Defense Advanced Research Projects Agency) the three Forces started an ambitious program of development of all the technology needed for the future UCAVs (PLAVETZ, 2009).

According to Etzioni (2013, p. 79):

Currently, several countries are developing UAVs capable of executing highly specialized mission; for example, minuscule versions, able to enter confined areas through tight passages. Considering that the US Armed Forces went from the use of conventional Ground Forces, as in Iraq and in Afghanistan, to a light footprint ("low profile" military intervention or presence) strategy focusing on offshore balancing ("external" or "remote" balance of power), as in Libya, the UAVs are likely to play an even more important role in future armed conflicts.

On June 19, 2011, the New York Times published a feature on the use of the use of UAVs by the American Armed Forces, where changes to air power were discussed. The article underlines that ten years ago the Pentagon had about fifty (50) UAVs. Today there are 7,000 drones in the Pentagon inventories. The article also shows the ten aircraft that are currently in battlefield or on designers' drawing boards (Figure 2).

## 6 POSSIBILITIES AND LIMITATIONS OF THE UAVS

Pardesi (2005) says that the UAV/UCAVs may come to play a critical role in missions generally classified as "monotonous (requiring coverage time beyond the capability of manned aerial vehicles), dirty (including reconnaissance in areas contaminated by chemical, biological or radiological agents) and dangerous (air defense suppression)". The author presents some considerations about the possibilities and limitations of the unmanned aircraft in accomplishing the most important aerial missions: intelligence, surveillance and reconnaissance (ISR); and armed reconnaissance and suppression of enemy air defenses (SEAD). Some of his conclusions are reproduced below:

The UAV is an innovative weapon system that avoids placing a pilot in harm's way, but it is not a truly disruptive technology as there will always be missions that will require the manned aircraft. Likewise, the unmanned platform has less flexibility

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and greater vulnerability; moreover, it cannot analyze its environment. Furthermore, many advanced unmanned platforms are as expensive as manned aircraft, and their high cost makes them attritionable, not expendable. Their software complexity, automation, and communications architecture make them operationally unreliable for many missions. [...] UAVs are going to perform the critical ISR mission in future military operations where they are likely to fly tactical missions together with their manned counterparts upon obtaining cues from satellites. MAVs with their potential to substantially transform urban operations and special operations missions will see their role enhanced in future conflicts (PARDESI, 2005).

including ground bases, auxiliary aircraft and a satellite monitoring network. The strikes carried out by armed UAVs are controlled from sites far away from the targets to be hit and operated from computer screens where the area to be attacked is displayed. By themselves these factors may appear alternately as advantages or drawbacks from the use of the UAVs.

On the other hand, there are arguments tending to focus on the legal aspects of the issue, balancing considerations that they do not allow any opportunity to surrender as well as to distinguish if the target is civilian or military. In other words, the UAVs have been the target of fierce debates on the lawfulness of their use within the LOAC framework. These issues will be analyzed in the following sections.

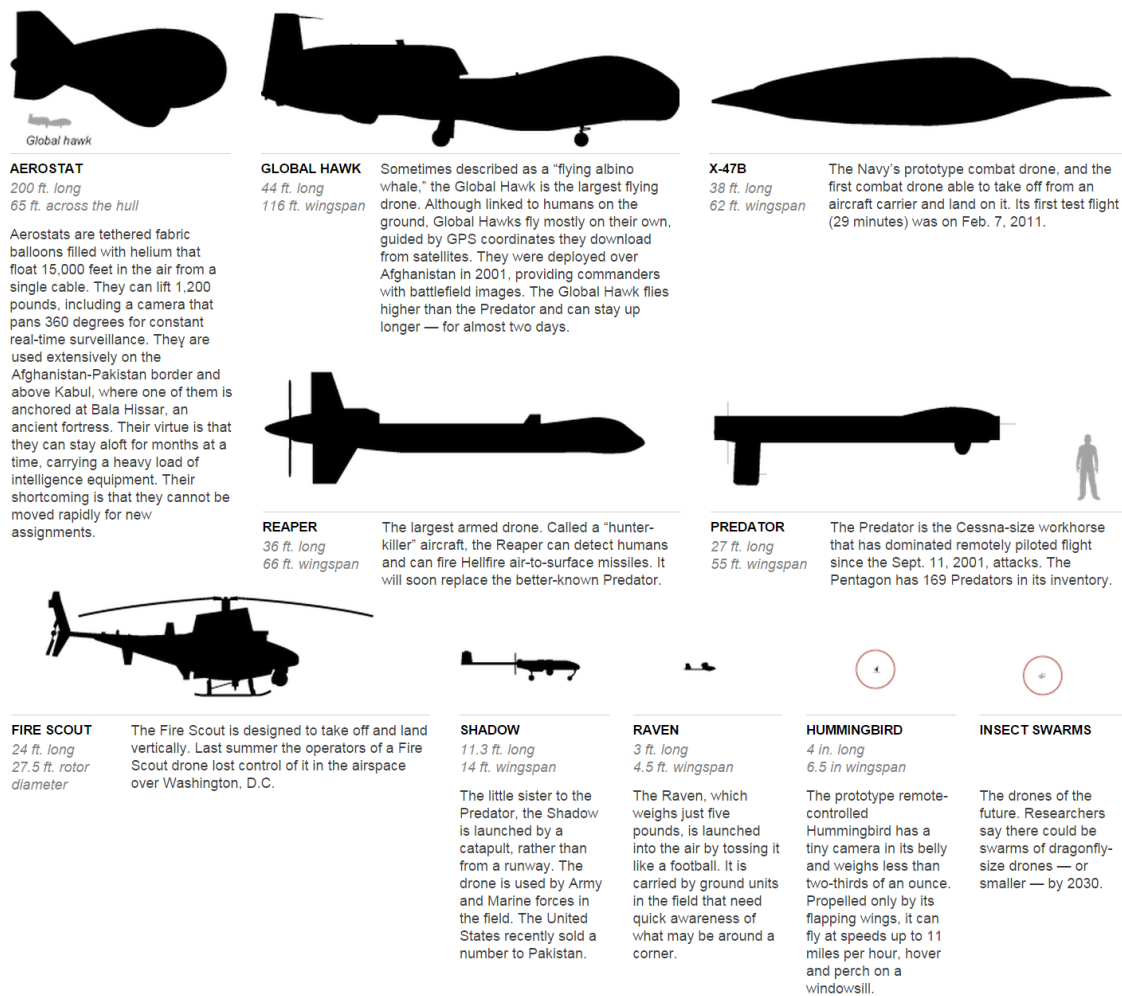
On the military point of view, a broad technological base is required for UAV/UCAV use,

Figure 2. UVA's development.

Published: June 19, 2011

The Changing Shapes of Air Power

Drones are playing an increasingly important role in the American military. Only 10 years ago, the Pentagon had about 50 drones; now there are 7,000 drones in its inventory, ranging in size from large blimps to tiny Hummingbirds. Here are 10 drones currently on the battlefield or on the drawing board. | [Related Article](#)



Fonte: THE CHANGING... (2011).

## 7 THE LOAC AND ITS BASIC PRINCIPLES

Before delving further on the subject, which is the use of combat UAVs and the LOAC principles, certain concepts must be succinctly defined, especially those involving this branch of International Public Law and its basic principles must also be enumerated.

### 7.1 The LOAC

At this point it is necessary to define the LOAC, which recently is best known as the IHL. The LOAC is a set of rules aiming at protecting people who do not take part in, or who, for some reason, did not take part in the combat. This includes the civil population, the health and religious military personnel, the wounded, the sick, the shipwrecked and the prisoners of war (MELLO, 1997).

Moreover, the IHL restricts means and methods of war, in order to minimize suffering in an environment of hostilities.

The scope of IHL application comprises the international armed conflicts between two or more countries, armed conflicts in the territory of one country between regular and irregular forces, the latter provided that duly organized. That is, the IHL it is applicable to the parties to the conflict.

The International Committee of the Red Cross (ICRC) is the leading global disseminator and advocate of IHL and its actions are mostly grounded on the Geneva Conventions and Additional Protocols. The CICV carries out its work by visiting prisoners of war, providing assistance to the civil population and reestablishing contact between family members who were separated.

### 7.2 Basic Principles

These are the principles to be emphasized for the purposes of this articles: Humanity, Limitation, Distinction, Proportionality and Military Necessity. The three first can be understood as limitations to the last one, which otherwise, could be seen as a level of freedom no to comply with the three others. It is the principle of Proportionality that tips the scale and helps to define what should carry more weight in each specific situation.

The principle of humanity exalts human dignity. In conceptual terms, this is the broadest of the principles and it affords protection to Man as a sentient being, capable of consciously selecting what above all, must be preserved, that is, human life. Minimizing loss of human life must be sought even in time of war.

The principle of Limitation requires that certain objectives and persons said to be protected must not be harmed. Thus, this principle limits the means, methods and agents that, on a conflict, can be deemed as targets.

The objective of the principle of distinction aims at having, before limitation, each one of the belligerent parties to distinguish which of its agents and assets must not be harmed. By doing so, the belligerent parties will minimize the likelihood of having such agents and assets in harm's way despite being already protected by the IHL. If each of the parties acts accordingly, both will count on easier identification of opponents and reduce collateral damage to people and assets.

The principle of military necessity is used to justify a strike to a legitimate target or target legitimated under the IHL. If one of the enemy forces uses someone or some facility as part of the hostilities, it will be making it a potential target. Similarly, despite the protection, if the objective is decisive to the force attacking it, by affording it significant military advantage and even reducing the possibility of larger collateral damage then, theoretically, this objective can be attacked.

The principle of proportionality allows "measuring" the difference in status of the previously mentioned facilities and persons. This principle reveals a judgment of value, which must be appreciated before deciding to strike. This measurement also encompasses the hard to assess collateral damages.

After this summary study it is now time to introduce the considerations about the combat UAVs and the various questions they raise.

## 8 DISCUSSION: THE LOAC AND USE OF COMBAT UAVS - PROS AND CONS

This Section will present the leading arguments in favor of the use of the so called armed combat UAVs, as well as the points of view of those who are against their use. The intent here is not to say which are correct or wrong, but just to offer additional inputs to the analysis of this subject.

### 8.1 Excess Casualties or Denial of Information on the Effects

On this subject there are authors who say that in almost 100% of cases combat UAVs kill innocent people (ABBOT, 2012). The Columbia University Law School (USA) reports the death of 35% civilians as a result of United States strikes in 2011. The New York Times talks about fifty civilians to each militant and, referring to this same year, the Bureau of Investigative Journalism says that civilians represent 35% of all casualties.

Conversely, the New America Foundation reports just 8% and other American agencies in charge of counterterrorism point to just 2.5% (SHANE, 2011), which would indicate less collateral damages than other sources, besides less victims and destruction. Added to these arguments are the praises to some of

the technical characteristics of the UAVs providing for a significant military advantage to the attacker, such as real time surveillance capacity, longer overflight time, reconnaissance and target selection and increased accuracy of these means (KELLENBERGER, 2011). On the human side, the possibility of sparing the lives of pilots, although they are military, can also be mentioned (STRAWSER, 2010).

Independent of the conflicting opinions, according to Friedersdorf (2012a) and TNMF (2012), a significant amount of data against the UAVs are collected from unreliable sources and local and, in some cases, biased media. From the considerations above it can be evidenced that the actual focus of interest is to pinpoint where is the weakness that leads to this or that amount of casualties. On this aspect, it seems that distinction between combatants and civilians is the leading cause of casualties among civilians, which according to McNeal (2011), amount to about 70% of all cases. Nonetheless, this is a hard situation to overcome, once the definition of combatant is variable in time and space, according to the selected referential. As an example, in the strike zone, all men in military service age could be combatants, unless explicit information exists posthumously proving their innocence (BECKER; SHANE, 2012). On the other hand, according to Vicente (2013), the database of the New America Foundation defines all unknown targets as militants. That is, this evidences that the classification criterion itself is variable; and the numerical data even more.

Also the military advantage issue brings the principle of proportionality to the table, when the decision making rationale about a strike would suffice to justify putting civilians close by in harm's way. By the way, this reasoning is said to account for about 8% of total civilian casualties (McNEAL, 2011). So, the issue is to identify the target and decide if it is advantageous and significant, to the point of becoming a military necessity.

## 8.2 Indiscriminate Use and Banalization of Violence

Friedersdorf (2012b) in publications in organizations, as for example, The Atlantic, refers to the UAVs as disseminators of murders devoid of apparent purpose. In this scenario, unlawfulness and the intimidating and homicidal (genocidal) silence would be prevalent. Banalization of violence can be viewed as an uninhibited distancing of system operator, based on the understanding that war is safer and easier and where enemies are mere numbered dots on a screen (SINGER, 2009).

On the other hand, combat UAVs are seen as pieces of equipment subject to strict controls that would not allow this banalization. For example, for the USA operations in Afghanistan the UAVs were operated by

just three agencies, namely: the CIA (Central Intelligence Agency), o JSOC (Joint Special Operations Command) and the Air Force. On this aspect it must also be emphasized that the military rules include a long list of prohibited targets, for reasons of civilians, structures and environmental damages (CHAIRMAN..., 2009). In case of dual use targets, two simultaneous requirements must be complied with: evidence that just the possible target is being used for military purposes and authorization, after this has been confirmed, from the highest ranks responsible for the operation, with the possibility of going up to the President of the Republic advised by lawmen and attorneys who challenge and analyze the lawfulness of the strikes (ISIKOFF, 2013).

In either of the extremes it must be considered if, as target classification criterion, a list is can separate legitimate from illegitimate, lawful from unlawful. On this point of view, the principles of distinction and limitation will acquire relevance, as it may be impossible to distinguish the dual function of an objective, in order to limit its indication as a target. In this event, if a clear view is unfeasible, presumption of "absolution" (civil target) should be inferred. This situation is applicable, for example, to strikes carried out by the CIA in Afghanistan; not so much to those carried out by the Air Force inside an already internationally recognized Theater of Operations, where just practices conflicting with the IHL are reprehensible.

## 8.3 Selection of UAV Targets

Those who question the UAV target selection criteria call attention to the fact that transparency is not among their merits. The targeted killings are designed and enforced by executive power authorities, even if based on legal advice attesting conformity with the IHL. In other words, they are not subject to challenge and are unilateral, lacking legitimacy. And, in the light of the IHL would operators be accountable for them or stand as mere instruments?

The opposite view, that argues in favor of the selection process enforced today for UAV use, taking the USA as an example, emphasizes the fact that advice is provided in the form of a defense of the opposing party, where attorneys are dedicated advocates of the absent party (possible target). In the case of the USA in the Iraq War, there was one attorney for each 240 combatants (CALDWELL, 2012). In this regard, according to the US Senate Foreign Relations Committee, adherence to the IHL and to the rules of engagement, consistency with the object of the mission is always sought, as well as "confirmation" by two verifiable human sources and other evidences such as filming. Besides, relationships between lawfulness, effectiveness, accuracy and the external policy are taken into consideration (ETZIONI, 2013, p. 82), all this to impart increased visibility to the

adopted system. It is just after this whole process has been completed that the operators would be allowed to execute a given operation. In addition, everything is ratified in the American government defense white book, where criteria are set for a clear understanding of what can be considered a target, specifically: to represent an imminent threat to the country, the object is an agent whose capture is unfeasible and the attack is carried out in line with the principles of the laws of war (SIKOFF, 2013).

Notwithstanding the differences of opinion, the issues of transparency and criteria are always submitted to the human evaluator who is part of the relationship, whether or not he is the President. This means that the possibility of risk exists as a result of a potential interest in a "positive" evaluation of the target. This is part of system design. The issue of military necessity in face of an incorrect evaluation of the distinction between a military and a non military target or non civil target is now evidenced.

## 8.4 Summary Executions

Besides the previous considerations about target selection, another juridical discussion in the light of the IHL comes up in regard to the UAVs. This discussion has to do with the claims that the UAVs are tools for out of court executions, almost like a death sentence, as they do not provide a chance of surrender. The judge and the executioner are merged in the same authority (FRIEDERSDORF, 2012c), in a so called shadow war (BOYLE, 2011). That is, people are trespassing on areas of court authority and jurisdiction. And more, presuming guilt and reversing the burden of proof.

In the opposite direction, those who argue for this system, most of all the American government, put emphasis on the fact that they are not dealing with military targets to be attacked, but rather with the pursuit of common criminals. As terrorists, these enemies would not be entitled to the protection afforded by the IHL and, as persecuted offenders, they could be captured and judged. And more, that those who attack the State, and its embassies do not deserve the same protection as the common national criminals. By the way, if wearing uniforms, they would be equally eliminated as combatants, without further objections. But this is not what really happens, and the evidences of combat do not meet the standards of materiality required by the civil courts and, therefore, a different type of action would result in the obligation to disclose confidential sources and methods of gathering data about criminals.

Thus, the issue of the summary executions is closely linked to the principles of humanity and limitation to the use of the UAVs as weapons. This is a prolonged discussion and it also involves the issue of proportionality between the damage caused and the way to extirpate it.

## 8.5 War Theaters

Another claim is that by going beyond borders between States, terrorists, whose execution has been authorized, would generate conflict with the international legal framework, leading to unilateral invasions of the territories of countries that are not involved in the strife, that is, generating *dura manus* enlargement of the Theater of War through the use of the UAVs (PREDATOR..., 2010). And further that combatants would only kill in combat, when acting in declared Theaters of War. On this aspect, the concept of "world" as the Theater of War would be taking shape, that is, the parties would strike at will any time and anywhere (ETZIONI, 2013, p. 87).

On the opposite direction, it is said that terrorist-type organizations move across borders making capture and trial or their agents much harder. The Al Qaeda does it on the borders of Afghanistan and Pakistan. Thus, if one is prevented from taking timely action at the correct site, the attempts to cut short the actions of terrorist organizations will be doomed to failure. In other words, this is a behavior premeditated and voluntary on the part of these insurgents, with the purpose of staying outside any legal framework and even of the IHL. In addition, such organizations appear and disappear gradually, with markedly diluted temporal existence, which hinders a clear understanding of the beginning and the end of the actual existence of a Theater of Operations (ETZIONI, 2013, p. 87).

The issue of the Theaters of War also involves distinction, military necessity and proportionality in face of the adverse impact on the international legal framework, most of all against the inviolability and sovereignty of the States.

## 8.6 Concealment of Military Objectives

Apparently there would be no questions about this aspect, once the site where military apparatuses are deployed would become a military target. Anyone acting as a combatant by bearing arms could be fired at in combat. Nonetheless, questions are raised on this aspect, when the episodes where supplies and weapons are placed in mosques, schools and homes are revealed. It can then be understood that these targets became legitimate combat UAV targets, since this a common practice among the so called terrorists (WEST, 2012, p. 209).

The authors writing about the IHL call attention to the fact that this transmutation can indirectly harm civilians who are not involved in armed conflicts, such as women and children who are normally used as human shields, it can only be feasible if the Regular Force is in danger of defeat.

Those who defend the possibility of using UAVs against these possible targets, claim that by failing to do so the transit across and permanence of terrorists in homes

would be freely authorized (CHANDRASEKARAN, 2012, p. 38).

Also, that by doing so, terrorists would be free to hide among the population. Furthermore, this is a common terrorist practice and if this prevents the strikes, all including the local populations would be left at the mercy of terrorist organizations, further encouraging such behaviors. Another important aspect is that, military means do not suffice to avoid these individuals, and they should be responsible for avoiding placing themselves in situations where their rights as protected civilians are waived, which is something they actually do when the decision to take up arms is made (CHANDRASEKARAN, 2012, p. 38).

It can be inferred that the issue of the use of the UAVs against militarized civilian targets and armed terrorists among the population, is linked to distinction between combatants and civilians, military and civil targets. In other words, in this case, it bears on the principle of distinction and if voluntary ignorance would lead to loss of the characteristics of the asset or person to be protected.

### **8.7 The UAVs and the Strikes Against Terrorists – Combatants or Criminals**

There are authors who claim that current terrorists should be treated as combatants and not as criminals. In this event, they could only be attacked by UAVs in declared Theaters of War, upon signature of the declaration of armed conflict and, consequently, should be treated as prisoners of war (BOYLE, 2012; FRIEDERSDORF, 2012c). Nonetheless, it is argued that treating them as prisoners of war would imply underestimating their actions and subjecting them to a state penal code providing on shorter sentences (ETZIONI, 2013, p. 86).

In opposition to this current of thought, for the already mentioned reasons related to the movement of terrorist groups and the definitions of Theaters of War, there are authors who claim that terrorists should not be treated as prisoners of war. It should be noted, however, that a combatant, entitled to the rules of the above mentioned body of law, is any person who officially takes part in the conflict, even if on their own free will, exception made of health professionals and religious personnel. Also in this sense, MELZER (2009, p. 11) says that pursuant to the principle of distinction, combatants are the persons who conduct the hostilities on behalf of the parties of an armed conflict, and civilians are all those who take no direct part in the hostilities. As to the terrorists, the claim is that the application to them of said body of law would mean affording extraordinary protection to those people who hide in the shadows at their convenience and, by the end of the conflict, would benefit from being freed as prisoners of war.

Other authors claim that there is a new juridical category that comes between combatants and criminal, which is applicable to terrorists. Terrorists would be combatants who violate the rules of international law of armed conflicts (BOBBIT, 2008; WITTES, 2008), targeting the civil populations and spreading terror.

The actual issue here is to determine if the UAVs would be allowed to attack combatants inside or outside the Theaters of War, or if common criminals could be attacked without legal process. It seems that the very core of this discussion is linked to the broader debate around the principle of distinction.

### **8.8 Use of the Media**

On the issue of the use of combat UAVs in modern war, the media is yet another actor that gains importance in the different situations that may occur. Those who defend the media argue that it serves to reveal the atrocities resulting from UAV strikes. It is also said that the coalition forces have made an indiscriminate use of UAVs in Afghanistan, killing innocent people. Likewise, the media would be fulfilling its mission of disseminating information and acting as a true supervisor on behalf of the IHL principles (KILCULLEN, 2009).

The opposing arguments refer to the fact that the local media are not always reliable and just looks for news, without any clear commitment to the truth. They say that the media was also sponsored by local terrorist groups, spreading out a veritable actual advertisement campaign aimed at convincing the public opinion and the international agencies. That is, the impacts of the UAVs were maximized and broadened, even encouraging their use in order to foster worldwide objections to their use (FRIEDERSDORF, 2012a).

This is a conjunctural discussion about the size of the collateral damage caused by the UAVs and if this level of IHL violation is acceptable. But, more than that, we are talking about the reliability of the information conveyed by the media driven by a full range of interests. The media can praise or criminalize the results of a campaign where UAVs are used, and this will influence the perception of and the applicability of the LOAC.

More than anything else the principles of proportionality and humanity of the strikes bear on the issue, provided that real data are conveyed by the information. If not, the principles will appear to the benefit of a false cause, but with consequences of presumption of reality.

### **8.9 Public Opinion**

Just like the media, public opinion can have a decisive influence on the conflicts. Public opinion perception is grasped by decision makers and government



officials, who, normally, seek to support their actions on public legitimacy, acting directly on the conflicts. Those who oppose the use of combat UAVs, argue that amidst the population, the UAVs more as promoters of local resentment and tools for recruiting and radicalization of individuals, in the opposite direction of the minimization of damage they propose to achieve (BOWCOTT, 2012). In addition, further harm is produced as their serve as a psychological weapon by continuously frightening the populations. Internally to the State that uses them, the UAVs would be able to isolate the national public opinion and weaken any political restrictions to a war - tending to make it unlimited - a true factory of casualties, which is easily started and has no set term to end (SLUKA, 2013, p. 34).

Other authors say that in the environments where animosity against the coalition forces has increased this fact was more related to other issues, such as, the publication of controversial cartoons about Islam. They also claim that this did not happened because of issues related to the use of the UAVs that even taken place during periods where American strikes in the Middle East had decreased (ETZIONI, 2013, p. 84; NEW..., 2012). It is also argued that central in this context is the fact that among pilots and the attacking ground forces casualties are minimized, as well as among the local population where they are used. Thus, the need for a physical presence in face of forces who act irregularly and even covertly, using improvised explosives, machine guns and rocket launching systems. Added to that is fact that forces that would be used before the arrival of the UAVs are removed from the Theater being freed to engage in nobler missions, as for example, participation in humanitarian crises and peacekeeping missions. In other words flexibility would be added to the deployment of troops. By the way, this could even mean dissuasion to fight by acting on the will of the attacked enemy, leading it to give up on the conflict. To the attacker this could mean the possibility to prevent combat casualties from a previous lengthy campaign based on combat UAVs.

It can be seen that even in these discussions the issues of proportionality and military necessity arise once again, once it is necessary to ask if obtaining a necessary military advantage would compensate the losses in terms of local and international public opinion and the resentment engendered by it. And it must also be asked if in terms of humanity the permanent psychological fear the UAVs could cause is justified.

## 8.10 Economic aspects

On the economic point of view, the opposition to the use of the UAVs comes from the fact that economically the UAVs cause more losses than other means. This can be associated to the arguments referred to in item 8.1 about collateral damage and the cost of the recomposition of the affected personnel and material

status quo. Furthermore, the cost of the UAVs, which are more expendable than the aircraft, would be cumulative, while manned aircraft would remain in service for longer periods of time, ultimately paying for their costs.

In economic terms the advocacy of the use of the UAVs is based on the argument that these savings will come within longer terms. Despite the expenses with occasional losses in combat, these platforms would not be expendable, besides saving the lives of pilots and, most of all, reducing the cost of keeping forces in permanent pursuit of terrorists. In other words, they would attack the terrorists while they represent threats on the ground and minimize expenditures and the risks related intelligence and field agents (JOHNSTON; SARBAHI, 2012).

Albeit realistic, this discussion about costs is in itself one of the principles of the IHL once, in line with the principle of humanity, it assigns economic value to lives.

## 8.11 Encouragement to Use

Those who argue in favor of not using the combat UAVs approach the issue from the stand point that their use by a State authorizes and encourages the other States to do the same, by pointing to them the possibility of eliminating people where and when they may think fit. And worse, besides the Sated, other international system players could start to use them without any form of control, for the most diverse purposes and even for terrorist attacks (BENJAMIN, 2012).

On the other hand, it is said that although the risk of popularizing the use of UAVs actually exists, this is a natural consequence. The other countries would also start to use them because of their operational advantages, even if a pioneering State failed to do so (the USA is the example) and, additionally, terrorist organizations and non state actors do not behave pursuant to self-control rules, making use of whatever weapon best suit their interests, independent from the resulting damages. This argument is compounded by the fact that not using the UAVs would only allow terrorists to move around free of risks, or would require the use of other means to stop them, as for example, hard to access air bombs that cause larger collateral damages.

Strictly speaking, we face the issue of the use of possibly forbidden means and of who is actually entitled to use them, all this within the context of the principle of limitation.

## 9 CONCLUSIONS AND RECOMMENDATIONS

The drones, that is, the combat UAVs, orUCAV as the Americans call them, are new means of waging war utilized in the complex scenarios of future conflicts, where uncertainty hovers as the best most likely picture of what lies ahead.

The broad spectrum of the actions brings new necessities to combat, in terms of technologies, means and combat methods. There is no going back on time. The evolution of weapons and of strategy itself requires each actor to get ready to fight on diversified fronts.

It is in this scenario that these new means of combat, the combat UAVs appear, and the way to use them puts the LOAC principles to test. Actually, the principles themselves are not questioned, but this scenario requires a new way of interpreting them in order to confirm their efficacy in face of the increasing breadth of the possibilities of UAV use. Discussions cannot definitely set a Yes or No to their use. Notwithstanding, they could discipline this use, so that, within the limits of barbarity a minimum civility can be demanded.

Thus, there are arguments both in favor and against the UAVs. This article just sought to present them in an unbiased manner. As they actually are set around principles, discussions are and will continue to be endless.

These principles, on their turn, lead to a discussion about concepts built by man along time and in the course of his relations, as for example, humanity, limitations and distinction, on one side, and proportionality and military necessity on the other.

The question future researches will be asked to answer has ceased to be about what is right or wrong right now, but possibly it has to do with introducing into the discussion the issue of how to bring to terms the use of the UAVs and the LOAC and its principles.

Evidences seem to indicate that a possible solution should involve increased international monitoring of who, when, how and against whom the combat UAVs will be used. Today control exists only at state level conducted, for example, by the United States Congress. (ETZIONI, 2013, p. 81). From there rules or even an international protocol on the subject could be established. And also, later on, the establishment of "universal rules of engagement" applicable to the use of the UAVs. As an example, although still in embryonic stage, we have the tripartite approval and prior monitoring system (in the form of approval or rejection) carried out by the United States and already mentioned in item 8.2 (ISIKOFF, 2013; ETZIONI, 2013, p. 81), with the participation of the CIA, the JSOC and the Air Force, as well as the use of a list of restricted targets (CHAIRMAN..., 2009).

In other words, such possibilities result from an extrapolation of the rules enforced nowadays, with the most perceptible example being the USA. Following this same path of inference, it can be said that prior, simultaneous and subsequent control would be needed by a supranational body free from biases or interests, in order to achieve compatibility between the LOAC principles and the current complexity of combats in all fronts. Hence, we would start from the preventive approach to progress to a repressive stance, in order to curtail unjustified frontal attacks to the IHL, until ultimately definition of the most serious behaviors that could impact humanity is achieved.

To conclude, we hope to have contributed the provisions of initial inputs to the study of such an interesting subject, so as to look for a minimum of humanity and rationality, precisely when reason does not prevail. The UAVs exist, are useful to State interests, and they must be fully understood once the UAVs just represent the reality of the current world.

## REFERENCES

ABBOT, S. New light on drone war's death toll. **Associated Press**, Feb 26, 2012. Available at: <<http://news.yahoo.com/ap-impact-light-drone-wars-death-toll-150321926.html>>. Accessed on: Oct 20, 2013.

ALVES NETO, A. **Geração de trajetórias para veículos autônomos não-tripulados**. 2008. 99 f. Dissertação (Mestrado em Ciência da Computação)-Universidade Federal de Minas Gerais, Belo Horizonte, 2008.

BECKER, J.; SHANE, S. Secret 'KillList' proves a test of Obama's principles and will. **The New York Times**, New York, May 29, 2012.

BENJAMIN, M. Drones create enemies—testimony. **Codepink**, Los Angeles, Nov 16, 2012. Available at: <<http://codepink.org/blog/2012/11/drones-create-enemies-testimony-by-medea-benjamin/>>. Accessed on: Oct 16, 2013.

BOBBITT, P. **Terror and consent: the wars for the twenty-first century**. New York: Alfred A. Knopf, 2008.

BOYLE, M. Obama's drone wars and the normalization of extrajudicial murder. **The Guardian**, London, Jun 11, 2012. Available at: <<http://www.guardian.co.uk/commentisfree/2012/jun/11/obama-drone-wars-normalisation-extrajudicial-killing>>. Accessed on: Oct 12, 2013.

BOWCOTT, O. Drone attacks in Pakistan are counterproductive, says report. **The Guardian**, London, Sept. 24, 2012, Available at: <<http://www.guardian.co.uk/world/2012/sep/25/drone-attacks-pakistan-counterproductive-report>>. Accessed on: Oct 15, 2013.

BRASIL. Ministério da Defesa. **MD 35-G-01: glossário das Forças Armadas**. Brasília, DF, 2007.

CALDWELL, C. Vetted, altered, blessed: power and constraint, by Jack Goldsmith. **The New York Times**, New York, Jun 08, 2012. Book Review. Available at: <<http://www.nytimes.com/2012/06/10/books/review/power-and-constraint-by-jack-goldsmith.html>>. Accessed on: Oct 9, 2013.

- CHANDRASEKARAN, R. **Little America: the war with in the war for Afghanistan**. New York: Alfred A. Knopf, 2012.
- CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION. **No-Strike and the Collateral Damage Estimation Methodology**. Washington, DC, 13 Feb. 2009.
- ETZIONI, A. O grande debate sobre os UAV. **Military Review**: Brazilian edition, p. 79-92, May-Jun 2013.
- FRIEDERSDORF, C. Flawed analysis of drone strike data is misleading Americans. **The Atlantic**, Washington, DC, Jul 18, 2012a. Available at: <<http://www.theatlantic.com/politics/archive/2012/07/flawedanalysis-of-drone-strike-data-is-misleading-americans/259836/>>. Accessed on: Oct 25, 2013.
- \_\_\_\_\_. Obama's execution of the drone war should terrify even drone defenders. **The Atlantic**. Washington, DC, Jul 12, 2012b. Available at: <<http://www.theatlantic.com/politics/archive/2012/07/obamas-execution-of-the-drone-war-should-terrify-evendrone-defenders/259704/>>. Accessed on: Oct 20, 2013.
- \_\_\_\_\_. Obama Plans for 10 More Years of Extrajudicial Killing by Drone. **The Atlantic**, Washington, DC, Oct 24, 2012c. Available at: <<http://www.theatlantic.com/politics/archive/2012/10/obama-plans-for-10-more-years-of-extrajudicial-killing-by-drone/264034/>>. Accessed on: Oct 10, 2013.
- HARDGRAVE, O. **Pioneirismo com o UAV**. Estados Unidos, 2005. Available at: <[http://www.ctie.monash.edu.au/hargrave/rpav\\_home.html](http://www.ctie.monash.edu.au/hargrave/rpav_home.html)>. Accessed on: Sept 03, 2013.
- ISIKOFF, M. Exclusive: Justice Department memo reveals legal case for drone strikes on Americans. **NBC News**, New York, Feb 04, 2013. Available at: <[http://openchannel.nbcnews.com/\\_news/2013/02/04/16843014-exclusive-justice-department-memoreveals-legal-case-for-drone-strikes-on-americans?lite&preview=true](http://openchannel.nbcnews.com/_news/2013/02/04/16843014-exclusive-justice-department-memoreveals-legal-case-for-drone-strikes-on-americans?lite&preview=true)>. Accessed on: Oct 09, 2013.
- JOHNSTON, P. B.; SARBAHI, A. **The impact of U.S. drone strikes on terrorism in Pakistan**. [S.l.], Feb. 2012. Working Paper. Available at: <<http://patrickjohnston.info/materials/drones.pdf>>. Accessed on: Oct 24, 2013.
- KELLENBERGER, J. International humanitarian law and new weapon technologies. **International Review of the Red Cross**, Geneva, n. 886, 2012. New technologies and warfare. Keynote address at the 34th Round Table on Current Issues of International Humanitarian Law, 8-10 Sept. 2011. Available at: <<http://www.icrc.org/eng/resources/documents/statement/new-weapon-technologies-statement-2011-09-08.htm>>. Accessed on: Oct 21, 2013.
- KILCULLEN, D. **The accidental guerrilla: fighting small wars in the middle of a big one**. New York: Oxford University Press, 2009.
- MAURER, P. **Peter Maurer**: O uso de drones carregados com armas deve cumprir com as leis. Entrevistador: Comitê Internacional da Cruz Vermelha. [Geneva], May 10, 2013. Available at: <<http://www.icrc.org/por/resources/documents/interview/2013/05-10-drone-weapons-ihl.htm>>. Accessed on: Aug 28, 2013.
- McNEAL, G. Are targeted killings unlawful?: a case study in empirical claims without empirical evidence. **Social Science Research Network**, Rochester, NY, Nov 04, 2011. Available at: <<http://ssrn.com/abstract=1954795>>. Accessed on: Oct 19, 2013.
- MELLO, C. D. de A. **Direitos humanos e conflitos armados**. Rio de Janeiro: Renovar, 1997.
- MELZER, N. **Interpretative guidance on the notion of direct participation in hostilities under humanitarian international law**. Geneva: International Committee of the Red Cross, May 2009.
- NEW AMERICA FOUNDATION. **The year of the drone: an analysis of U.S. drone strikes in Pakistan, 2004-2013**. Washington, DC, 2012. Available at: <<http://counterterrorism.newamerica.net/drones>>. Accessed on: Oct 04, 2013.
- PARDESI, M. S. Veículos aéreos não-tripulados/veículos aéreos de combate não-tripulados. **Air & Space Power Journal**, p. 56-66, 4 p. 56-62005. Available at: <<http://www.airpower.maxwell.af.mil/apjinternational/apj-p/2005/4tri05/pardesi.html>>. Accessed on: Aug 27, 2013.
- PLAVETZ, I. Revolução nos céus e na guerra: UAVs. In: **Revista Tecnologia e Defesa**, a. 22, n. 103, p. 56-64, 2009.
- PREDATOR drones, targeted killing, and the law. Panelists: Benjamin Wittes; Mary Ellen O'Connell. New York, NY: Fordham Law School, Oct. 2010. International Law Weekend. Available at: <[http://www.youtube.com/watch?v=tb62LLvy\\_aU](http://www.youtube.com/watch?v=tb62LLvy_aU)>. Accessed on: Oct 24, 2013.
- [SEM TÍTULO], [1880?]. In: Veículos aéreos não tripulados. In: SEMINÁRIO INTERNACIONAL DE UAV, 1., 2005, São José dos Campos, SP. **Apresentações**. São José dos Campos, SP, 2005. Available at: <[http://www2.anac.gov.br/certificacao/sUAV/Apresetacoes/15\\_Arquitetura\\_de\\_Sistema\\_de\\_Navega%E7%E3o\\_FITEC.pdf](http://www2.anac.gov.br/certificacao/sUAV/Apresetacoes/15_Arquitetura_de_Sistema_de_Navega%E7%E3o_FITEC.pdf)>. Accessed on: Oct 10, 2014.

SHANE, S. C.I.A. is disputed on civilian toll in drone strikes. **The New York Times**, Ago 11, 2011. Available at: <[www.nytimes.com/2011/08/12/world/asia/12drones.html](http://www.nytimes.com/2011/08/12/world/asia/12drones.html)>. Accessed on: Oct 26, 2013.

SINGER, P. W. Military robots and the laws of war. **The New Atlantis**, Washington, DC, n. 23, p. 25-45, Winter 2009.

SLUKA, J. A. A morte que vem de cima: os UAV e a perda de corações e mentes. **Military Review**: Brazilian edition, n. 3, p. 28-35, May-Jun 2013.

STRAWSER, B. J. Moral predators: the duty to employ uninhabited aerial vehicles. **Journal of Military Ethics**, v. 9, n. 4, p. 342-368, Dec 2010.

THE CHANGING shapes of air power. **The New York Times**, New York, June 19, 2011. Available at: <[http://www.nytimes.com/interactive/2011/06/19/world/drone-graphic.html?\\_r=0](http://www.nytimes.com/interactive/2011/06/19/world/drone-graphic.html?_r=0)>. Accessed on: Oct 26, 2013.

VICENTE, J. **Guerra aérea remota**. Porto: Fronteira do Caos, 2013.

WEST, B. **The wrong war**: grit, energy, and the way out of Afghanistan. New York: Random House Publishing Group, 2012.

WITTES, B. **Law and the long war**: the future of justice in the age of terror. New York: Penguin Books, 2008.

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*The concept of authorship adopted by Meira Mattos Collection is based on substantial contributions to each of the persons listed as authors, following the categories below:*

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